SIEMENS

SOMATOM DEFINITION AS

TYPICAL ROOM PLAN

The intended use for this Cut Sheet is to communicate the spatial requirements as well as the basic architectural, electrical, structural, and mechanical requirements for this piece of imaging equipment. The information provided in this document is for reference only, during the pre-planning stage, and therefore does not contain any site specific detailed requirements. This information is subject to change without notice. Federal, state and/or local requirements may impact the final placement of the components. It is the customer's responsibility to ensure that the final layout and placement of the equipment complies with all applicable requirements.

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NOT FOR CONSTRUCTION.

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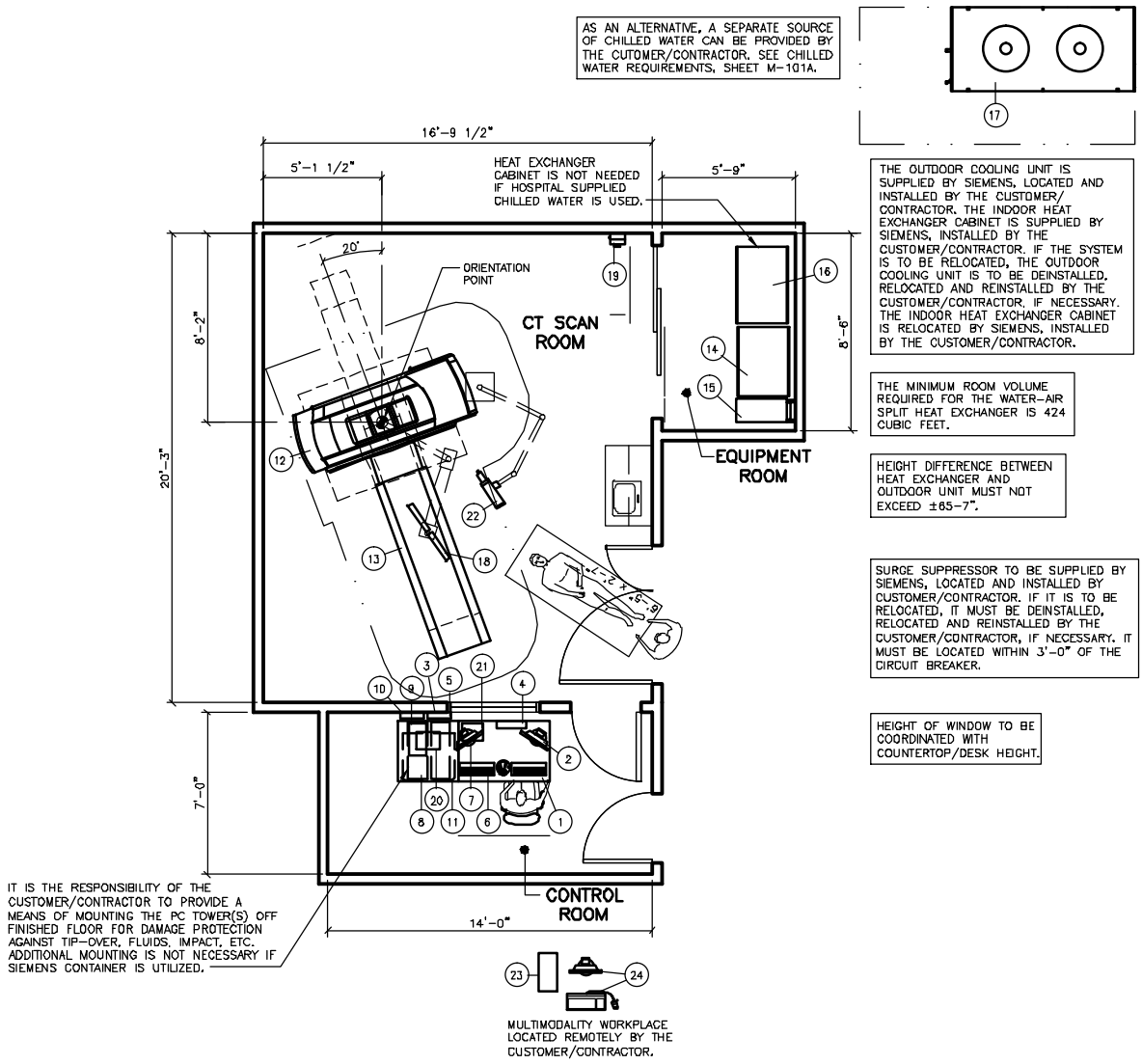
CT



TYPICAL PLAN

SCALE: 1/8" = 1'-0"

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SOMATOM DEFINITION AS

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EQUIPMENT LEGEND

NO	DESCRIPTION	SMS SYM	WEIGHT (LBS)	BTU/HR TO AIR	DIMENSIONS (INCHES) W	D	H	REMARKS
1	OPERATING CONSOLE W/KEYBOARD AND CONTROL BOX		132	43	47 1/4	31 1/2	29 1/4	
2	19" FLAT SCREEN MONITOR ICS		20	256	16 9/16	8 1/4	16 1/16	ON CONSOLE/COUNTER
3	POWER CONNECTION TERMINAL – ICS	PIT	---	---	13 9/16	2 15/16	5 11/16	WALL MOUNTED
4	DVI SPLITTER – ICS	VS	---	---	15 3/4	3 15/16	11 13/16	MOUNTED ON THE CONSOLE/CONTAINER
5	SYNGO ACQUISITION WORKPLACE	ICS	<66	1,706	9 13/16	29 1/2	18 1/2	OFF FLOOR/IN CONTAINER
6	IMAGE EVALUATION KEYBOARD (OPTION)		–	---	---	---	---	ON CUSTOMER'S COUNTER
7	19" FLAT SCREEN MONITOR FOR IES (OPTION)		20	256	16 9/16	8 1/4	16 1/16	ON CONSOLE/COUNTER
8	SYNGO CT WORKPLACE (OPTION)	ES	<66	1,706	9 13/16	29 1/2	18 1/2	OFF FLOOR/IN CONTAINER
9	UPS FOR IES (OPTION)	UP	36	171	9 3/16	16 7/16	5 13/16	
10	POWER CONNECTION TERMINAL – IES (OPTION)	PITZ	---	---	---	---	---	WALL MOUNTED
11	CONTAINER FOR ICS/IES (OPTION)	IVS	77	---	31 1/2	31 1/2	29 1/4	HOUSING FOR ICS/IES
12	SOMATOM DEFINITION AS GANTRY	B	4,850	3,412*	93 11/16	36 5/8	78	*ADDITIONAL HEAT DISSIPATED TO WATER
12	SOMATOM DEFINITION AS GANTRY	B	4,850	44,357*	93 11/16	36 5/8	78	* AIR COOLED GANTRY
13	PATIENT TABLE		1,103	1,024	28	95 11/16	33 7/16	2000mm TABLE
14	POWER DISTRIBUTION CABINET	PDC	1,373	6,824	35 7/16	27 1/4	76 3/4	UPS LOCATED INSIDE OF PDC
15	IMAGE RECONSTRUCTION SYSTEM	IRS	106	5,122	12 1/4	30 3/4	19 5/8	
16	HEAT EXCHANGER CABINET – WATER/AIR SPLIT (OPTION)	S	904	3,412	39 3/8	27 1/4	77	
17	OUTDOOR UNIT – WATER/AIR SPLIT (OPTION)	S2	397	102,364	95 1/2	43 1/4	40 3/16	
18	CARE VISION DUAL MONITOR (OPTION)	F1	157	512	---	---	---	CEILING MOUNTED
19	EATON SURGE PROTECTIVE DEVICE PANEL (OPTION)	SPK	13.5	---	7 1/2	6 11/16	12	WALL MOUNTED
20	MEDRAD DISPLAY CONTROL UNIT (OPTION)	IN1	8	---	12 1/2	9	13 1/2	HEIGHT WITH SCREEN UP
21	MEDRAD BASE UNIT (OPTION)	IN2	14	---	11	8 3/4	11 1/2	UNDER COUNTER ON SHELF
22	CEILING MOUNTED MEDRAD INJECTOR (OPTION)	IN3	106	---	---	---	---	SEE MFG SPECIFICATIONS
23	MULTIMODALITY WORKPLACE COMPUTER (OPTION)	MW	55	---	19 3/4	10	23 5/8	ON CUSTOMER'S COUNTER
24	MULTIMODALITY WORKPLACE KEYBOARD AND MONITOR (OPTION)		–	---	---	---	---	ON CUSTOMER'S COUNTER

FINISHED ROOM HEIGHT

FOR CT GANTRY ONLY	MINIMUM 7'–6 9/16"
CAREVISION MONITOR/CEILING MOUNT	MIN. 8'–7 1/2" MAX. 11'–2 5/8"

FOR MORE INFORMATION

FOR MORE DETAILED PLANNING REQUIREMENTS FOR THIS SYSTEM, SEE THE TYPICAL FINAL DRAWING SET NUMBER: 08006

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POWER REQUIREMENTS

SYSTEM	LINE VOLTAGE (VOLTS)	POWER CONSUMPTION (kVA)	INCOMING LINE IMPEDANCE (mΩ)	AUTOMATIC CIRCUIT BREAKERS (AMPS)	MAIN CIRCUIT BREAKER (AMPS)
SOMATOM DEFINITION AS	3ø 480±10%	SEE BELOW	≤ 125	125	125

POWER FACTOR 0.85 OR HIGHER REQUIRED.

POWER CONSUMPTION (WITH STANDARD WATER/WATER HEAT EXCHANGER OR AIR COOLED SYSTEM)

OPERATING FOR 3 SEC – 140 kVA
OPERATING FOR 100 SEC – 43 kVA
SYSTEM ON (STAND–BY) – 4 kVA
SYSTEM ON (COMP ON) – 2.5 kVA
GANTRY OFF (EVA ON) – 1.7 kVA

POWER CONSUMPTION (WITH OPTIONAL WATER/AIR SPLIT COOLING SYSTEM)

OPERATING FOR 3 SEC – 159 kVA
OPERATING FOR 100 SEC – 62 kVA
SYSTEM ON (STAND–BY) – 23 kVA
SYSTEM ON (COMP ON) – 2.5 kVA
GANTRY OFF (EVA ON) – 1.7 kVA

IF AN ON–SITE PRE–TRANSFORMER IS REQUIRED, IT MUST BE A MIN. OF 160 kVA.

ALL STANDARD COMPONENTS AND ADD–ONS ARE SUPPLIED VIA THE POWER DISTRIBUTION SYSTEM.

DO NOT CONNECT NON–SIEMENS COMPONENTS SUCH AS LASER CAMERAS OR FILM PROCESSORS TO THE SIEMENS POWER DISTRIBUTION SYSTEM (PDS).

THE EXAMINATION ROOM SHOULD BE EQUIPPED WITH AT LEAST ONE EMERGENCY POWER OFF (PANIC) BUTTON.

TO ENSURE SATISFACTORY SYSTEM OPERATION THE PDS MUST HAVE A DEDICATED PROTECTIVE GROUND CONDUCTOR.

CASEWORK & ACCESSORY NOTES

1) ALL CASEWORK IS EITHER EXISTING OR IS TO BE DESIGNED, DETAILED, FURNISHED AND INSTALLED BY THE CUSTOMER AND/OR CONTRACTOR. FOLLOW DESIGN RECOMMENDATIONS INCLUDED HEREWITH, AS THEY ARE ESSENTIAL FOR THE SUCCESSFUL INSTALLATION & OPERATION OF THE SIEMENS EQUIPMENT.

2) ALL FURNITURE (CHAIRS, ETC.) FOR THE CONTROL ROOM ARE TO BE PROVIDED BY THE CUSTOMER.

HOSPITAL WATER

CHILLED WATER

THE GANTRY IS COOLED WITH CHILLED WATER IN A CLOSED LOOP CONNECTION FROM THE ON–SITE CHILLED WATER SUPPLY. AN ON–SITE CONNECTION TO THE CHILLED WATER SUPPLY MUST BE AVAILABLE TO SUPPLY THE HEAT EXCHANGER LOCATED INSIDE THE GANTRY. THE REQUIRED WATER TEMPERATURE IS 39.2 TO 53.6˚F. THE NOMINAL OPERATING PRESSURE IS 29 TO 87 PSI, (MAX. 145 PSI). THE MINIMUM FLOW RATE DEPENDS ON THE WATER TEMPERATURE. DIFFERENTIAL PRESSURE AS RELATES TO WATER CIRCULATION. HEAT DISSIPATION INTO THE WATER IS 40,946 BTU/HR.

WATER/AIR SPLIT

GANTRY COOLING

THE GANTRY IS COOLED WITH CHILLED WATER IN A CLOSED LOOP CONNECTION FROM THE HEAT EXCHANGER. THE HEAT EXCHANGER CABINET IS COOLED WITH CHILLED WATER IN A CLOSED LOOP CONNECTION FROM AN OUTDOOR COOLING UNIT. THE AMBIENT AIR TEMPERATURE RANGE REQUIRED FOR THE OUTDOOR COOLING UNIT IS –22˚ TO 122˚ (–40˚ TO 122˚ WITH FLOW HEATER OPTION). BTU/HR TO AIR (EXHAUST) IS 102,364.

AIR COOLED

AIR–COOLED GANTRY

THE AIR–COOLED GANTRY HAS INTEGRATED COOLING FANS FOR AIR INTAKE AND AIR EXHAUST. ROOM AIR IS USED AS COOLING AIR. THE REQUIRED AIR INTAKE TEMPERATURE IS 64.4 TO 82.4˚F. THE REQUIRED AIR FLOW RATE THROUGH THE GANTRY IS 81,224 CUBIC FEET/HOUR. HEAT DISSIPATION INTO THE AIR IS 44,357 BTU/HR. THE RATING CAPACITY OF THE ROOM AIR CONDITIONER HAS TO TAKE INTO ACCOUNT THE STRUCTURAL CONDITIONS (EX. WINDOWS, BUILDING & ROOM THERMAL INSULATION, ROOM SIZE, ROOM VOLUME, ETC.) OF THE SCAN ROOM TO ENSURE THAT THE TEMPERATURE RANGE OF AIR NEEDED FOR THE SYSTEM IS MAINTAINED.

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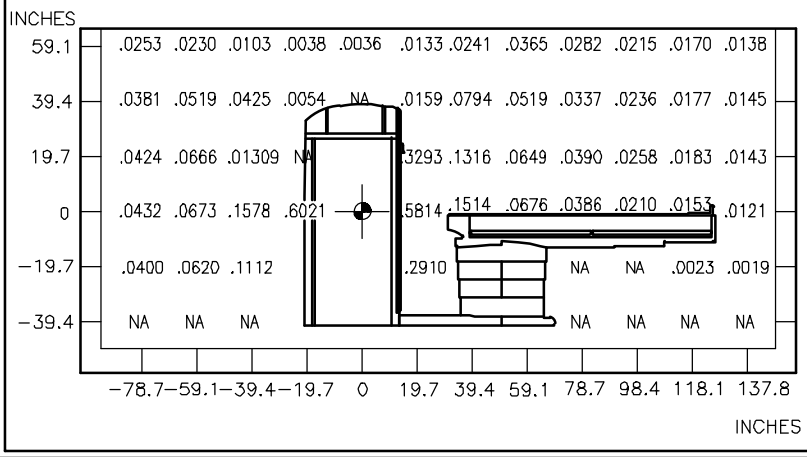
RADIATION SCATTER



SOMATOM DEFINITION AS

VERTICAL LOCAL DOSE DISTRIBUTION
MEASUREMENT IN uGy/mAs SCALE 1/4"=1'−0"

SCANNING WAS PERFORMED USING A MAXIMUM SLICE THICKNESS OF 64 x 0.6 mm (38.4 mm) AT 140 kV THROUGH THE SYSTEM AXIS IN THE VERTICAL PLANE. PHANTOM USED: CYLINDRICAL PMMA PHANTOM, 32 cm IN DIAMETER, 16 CM LONG. THE PHANTOM WAS CENTERED IN THE TOMOGRAPHIC PLANE.

DELIVERY

TRANSPORTING INFORMATION:

TOTAL GANTRY TRANSPORT WEIGHT: 5,267 LBS.

GANTRY WITHOUT TRANSPORT DEVICE: 4,850 LBS.
TRANSPORT DEVICE: 417 LBS.

GANTRY TRANSPORTING WIDTH: 4'−8 5/8" MAXIMUM.
3'−0 5/8" MINIMUM.

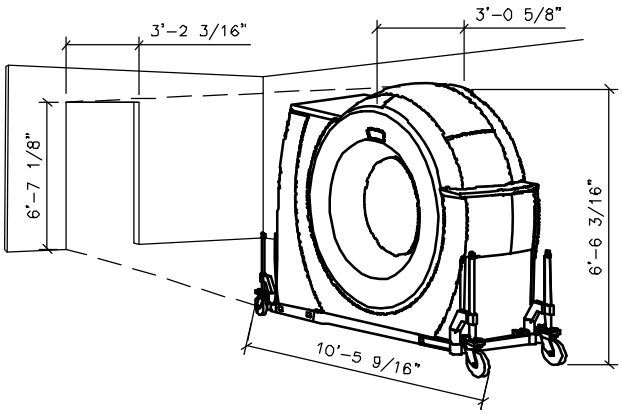
GANTRY TRANSPORTING LENGTH: 10'−5 9/16" MAXIMUM.
8'−5 9/16" MINIMUM.

NORMAL TRANSPORT REQUIREMENTS:

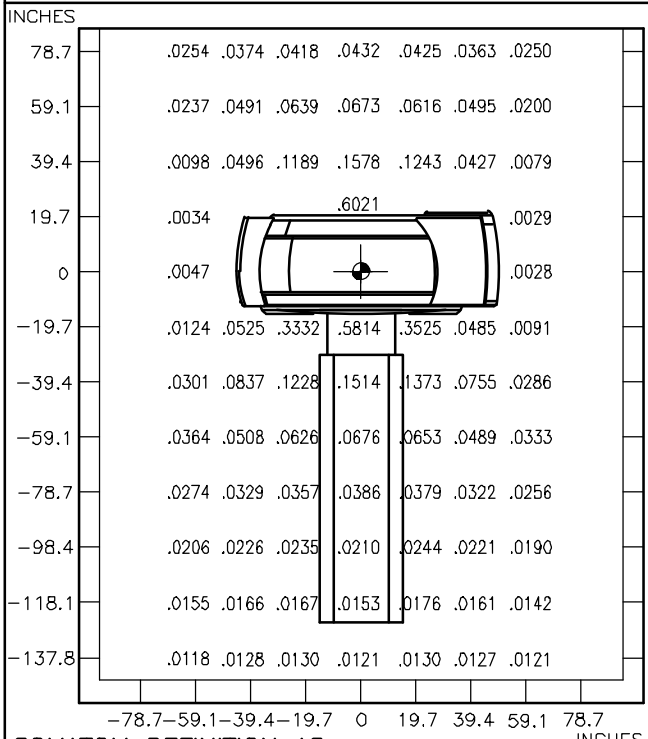
DURING THE MOVEMENT OF THE GANTRY THROUGH CORRIDORS THE TRANSPORT CASTERS ARE SWIVELED OUT FOR STABILITY. SEE MAXIMUM WIDTH AND MINIMUM LENGTH ABOVE FOR TRANSPORT CASTERS SWIVELED OUT.

NARROW SPACE TRANSPORT REQUIREMENTS:

WHEN TRANSPORTING THE GANTRY THROUGH A NARROW SPACE OR DOORWAY THE TRANSPORT CASTERS ARE SWIVELED IN AS SHOWN IN THIS SKETCH.



RADIATION SCATTER



SOMATOM DEFINITION AS

HORIZONTAL LOCAL DOSE DISTRIBUTION
MEASUREMENT IN uGy/mAs SCALE 1/4"=1'−0"

SCANNING WAS PERFORMED USING A MAXIMUM SLICE THICKNESS OF 64 x 0.6 mm (38.4 mm) AT 140 kV THROUGH THE SYSTEM AXIS IN THE HORIZONTAL PLANE. PHANTOM USED: CYLINDRICAL PMMA PHANTOM, 32 cm IN DIAMETER, 16 CM LONG. THE PHANTOM WAS CENTERED IN THE TOMOGRAPHIC PLANE.

SOMATOM DEFINITION AS

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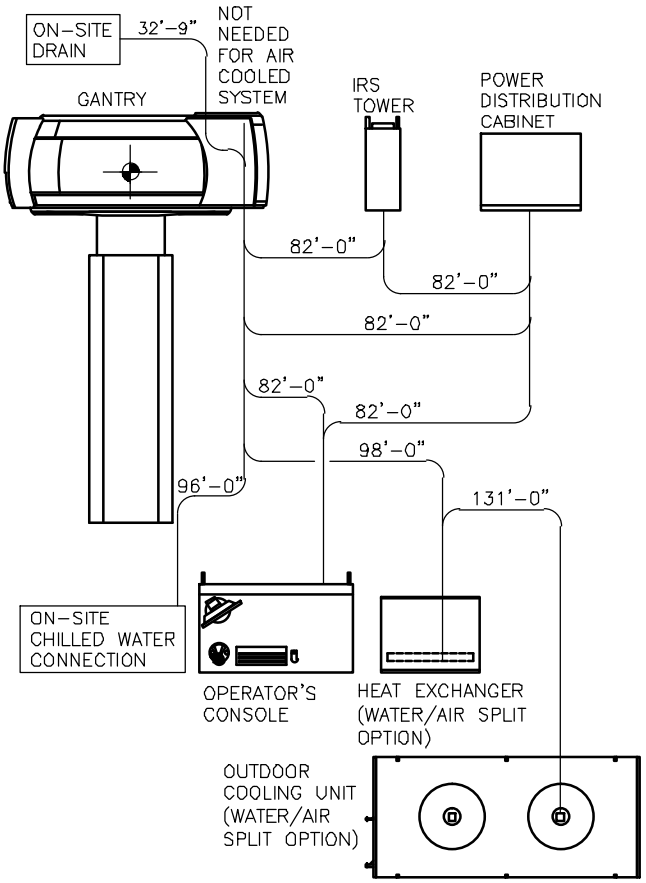
MAXIMUM DISTANCES

THE MAXIMUM DISTANCE BETWEEN COMPONENTS IS CALCULATED AS THE DISTANCE FROM CABLE OUTLET TO CABLE OUTLET. VARIOUS ARRANGEMENTS OF COMPONENTS ARE POSSIBLE AS LONG AS THE DISTANCES SHOWN BELOW ARE NOT EXCEEDED AND THE REQUIRED MINIMUM SAFETY DISTANCES ARE MAINTAINED.



TO AVOID INTERFERENCE, THE FOLLOWING MINIMUM DISTANCES HAVE TO BE MAINTAINED:

PDC <--> CRT MONITOR: MINIMUM 3'–3"
GANTRY <--> ECG–WORKSTATION: MINIMUM 16'–5" (1)
GANTRY <--> EEG–WORKSTATION: MINIMUM 19'–8" (1)

1) MINIMUM DISTANCE BETWEEN THE LINE VOLTAGE CABLES = 19'–8"

REMOTE SYSTEM DIAGNOSTICS

SIEMENS REMOTE SERVICES (SRS) REQUIRES A CONNECTION BETWEEN THE SRS REMOTE SERVER AND SIEMENS SYSTEMS VIA REMOTE LOCAL AREA NETWORK ACCESS, TO ENSURE THE UPTIME OF YOUR SYSTEM.

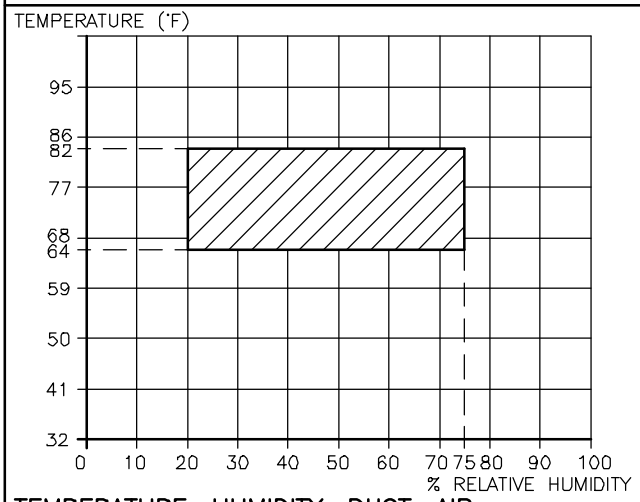
THIS SERVICE REQUIRES ONE OF THE FOLLOWING CONNECTION METHODS:
1. (PREFERRED) VPN – WHERE THE CUSTOMER HAS AVAILABLE A VPN CAPABLE FIREWALL OR OTHER VPN APPLIANCE.
2. (OPTIONAL) *SRS ROUTER* – CONNECTED TO ANALOG PHONE LINE VIA *ANALOG MODEM*, ETHERNET CONNECTION TO CUSTOMER'S LAN, AND A POWER OUTLET. NOTE: = *SUPPLIED BY SIEMENS*

NOISE LEVEL

SYSTEM COMPONENT	DECIBEL LEVEL (AT 3'–3" DISTANCE)
GANTRY	<70
PATIENT TABLE	<60
PDC CABINET	≤55
IRSmx2C TOWER (40/64 SLICE CONFIG.)	50 TO 55 (1)
IRSmx2b TOWER (128 SLICE CONFIG.)	<55
HEAT EXCHANGER – WATER/AIR SPLIT	<60

1) NOISE DEPENDS ON THE ROOM TEMPERATURE AND THE PROCESSOR LOAD.

ENVIRONMENTAL REQUIREMENTS



TEMPERATURE, HUMIDITY, DUST, AIR CONTAMINATION:

REFER TO THE CLIMATOGRAM ABOVE FOR THE PERMITTED CLIMATE RANGE.

THE MAXIMUM TEMPERATURE GRADIENT IS 6 K/HR.

THE ENVIRONMENTAL REQUIREMENTS FOR THE OPERATOR AND THE SYSTEM IS 64 TO 82 °F WITH A RELATIVE HUMIDITY OF 20–75% AND A BAROMETRIC PRESSURE OF 10.2 TO 15.4 PSI.

EXTERIOR AIR VENTS SHOULD BE EQUIPPED WITH A FILTRATION SYSTEM OF THE FILTER CLASS MERV 8 TO FILTER DUST PARTICLES >10 um.

THE ROOM AIR SHOULD BE PROTECTED AGAINST CONTAMINATION BY HYDROGEN SULPHIDE, EVEN IN SMALL AMOUNTS. IF A DANGER OF SUCH CONTAMINATION EXISTS, CORRECTIVE ACTIONS HAVE TO BE TAKEN. E.G., EXTRACTOR FANS, SIPHON, MODIFICATION OF VENTILATION INTAKE, ETC..